

# Welcome to Data Visualization & Wrangling Course

By Sekolah Data, Pacmann AI

## Outline

<b>Course Summary.....</b>	<b>2</b>
<b>References.....</b>	<b>2</b>
<b>Syllabus.....</b>	<b>2</b>
<b>Tools.....</b>	<b>4</b>

# Course Summary

You will be able to:

- Visualize data by the right visualization based on each objective and avoid bad visualization
- Conduct Exploratory Data Analysis (EDA) and interpret the visualizations
- Clean and manipulate data by handling several issues of raw data
- Make plots using Tableau and Seaborn

## References

1. Data Visualization — Kieran Healy | [Link](#)
2. Fundamentals of Data Visualization — Claus O. Wike | [Link](#)
3. Why is Data Visualization Important — Antony Unwin | [Link](#)

## Syllabus

No	Topic	Outline
1	Effective Data Visualization	Why Visualization is Important What is Visualization Types of Visualization Bad Taste Bad Data Bad Perception A Good Way to Learn Visualization
2	Make a Plot with Tableau	Visualization Elements Connect to Data Worksheet and Dashboard Get to Know Your Data Dashboard and Story Visualization Goals and Create Visualizations
3	Visualization for Amounts & Proportions	Heatmap and Barchart Good and Bad Examples of Amounts Grouped Barchart Visualizing Proportions Good and Bad Examples of Proportions
4	Visualization for Distribution	A Pitfall in Descriptive Statistics Making a Histogram Making a Density Plot

		Type of Distributions Central Tendency Dispersions Boxplot
5	Visualization for The Relationship between Two Variables	Recall on Descriptive Statistics Scatter Plot and Correlation Strength of Correlation Trends
6	Visualization for Two or More Variables	Challenge in Visualization with Many Features Small Multiple Figures Compound Figures T-SNE
7	Exploratory Data Analysis (EDA) - 1	What to do in EDA How to do EDA EDA - Univariate EDA - Bivariate
8	Exploratory Data Analysis (EDA) - 2	Common Pitfalls in EDA Data Filtering - Avoiding Pitfalls Transformation - Avoiding Pitfalls Study Case
9	Pandas Data Structure	Introduction to Pandas Series Dataframe Read Data Casting Data Types Combining Data Export Data
10	Data Selection	Set and Remove Index Data Selection by Index Data Selection by Condition Slicing Data with Multiple Index
11	Data Cleansing	Introduction Handling Missing Values Handling Outlier Handling Duplicates Handling Inconsistent Format
12	Data Manipulation	Grouping Pivot Apply Function Dates Data

13	Case I: House Price Data Cleaning	Review EDA Introduction to Seaborn 1D Plot 2D Plot Styling Plot
14	Case II: Air BnB Data Cleaning	Case Introduction Subplots Simple Data Cleaning

## Tools

1. Tableau
2. Python